

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

[Handwritten mark]

2



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/549,620	04/14/2000	Anoop Kumar Mathur	H16-26292	9366

128 7590 08/16/2004

HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

HIRL, JOSEPH P

ART UNIT PAPER NUMBER

2121

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

[Handwritten mark]

Office Action Summary

Application No.

09/549,620

Applicant(s)

MATHUR ET AL.

Examiner

Joseph P. Hirl

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7,9-18 and 20-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-36 is/are allowed.
- 6) ☒ Claim(s) 1-7,9-18,20-24 and 37-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. This Office Action is in response to an AMENDMENT entered June 1, 2004 for the patent application 09/549,620 filed on April 4, 2000.
2. All prior office actions are fully incorporated into this Final Office Action by reference.

Status of Claims

3. Claims 1-3, 6, 9, 23, and 29-32 are amended. Claims 37-39 are new. Claims 1-7, 9-18 and 20-39 are pending.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 1 –7, 9-17, and 20-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Kohn et al (U. S. Patent 5,963,447).

Claim 1

Kohn anticipates annotating one or more actions of a sequence of actions in the production recipe with a desired intention for the one or more actions,

Art Unit: 2121

wherein the production recipe is for producing a quantity of a product (**Kohn**, col 4, lines 57 – 62; col 6, lines 14 – 17; col 18, lines 44 – 45; c 21, lines 40-44; col 36, lines 43-67); generating an advanced recipe as an output, wherein the advanced recipe comprises the sequence of actions and the desired intention , and wherein the advanced recipe is used to enable tailoring of the production recipe to specific needs (**Kohn**, col 21, lines 40-55).

Claim 2

Kohn anticipates annotating the one or more actions with a desired state for the one or more actions (**Kohn**, col 4, lines 57 – 62; col 6, lines 14 – 17; col 18, lines 44 – 45; col 2, lines 38 – 40).

Claim 3

Kohn anticipates receiving knowledge from one or more sources (**Kohn**, col 18, lines 44 – 45); and generating through computer automated operations a recipe comprising a set of actions and a purpose of an underlying process, wherein the recipe is for producing a quantity of a product (**Kohn**, col 1, lines 8 – 16; col 21, lines 40 – 43; col 4, lines 34 – 37; col 36, lines 43-67).

Claim 4

Kohn anticipates modifying the recipe (**Kohn**, col 6, lines 14 – 17; col 21, lines 32 – 43).

Claim 5

Kohn anticipates the knowledge is received from a user (**Kohn**, col 18, lines 44 – 45).

Claim 6

Kohn anticipates receiving data from multiple knowledge sources (**Kohn**, col 18, lines 44 – 45; col 55, lines 34 – 36); storing the data in a structured knowledge repository (**Kohn**, col 55, lines 37 – 38); and modifying a recipe for a batch processing situation using the data stored in the knowledge repository, wherein the recipe contains steps and purposes and wherein the recipe is for producing a quantity of a product (**Kohn**, col 53, lines 54-60; col 36, lines 43-67).

Claim 7

Kohn anticipates modifying the recipe further comprises using inputs from a user (**Kohn**, col 18, lines 44 – 45; col 21, lines 32 – 43).

Claim 9

Kohn anticipates a Knowledge Builder to derive from multiple knowledge sources (**Kohn**, col 18, lines 44 – 45); a Structured Knowledge Repository to store and organize the knowledge, wherein the Structured Knowledge Repository organizes knowledge and provides links between specific pieces of information and the functional purposes to which the knowledge can be put (**Kohn**, col 19, lines 1-13); and a Decision Maker to use the knowledge stored in the structured knowledge repository to identify one or more modifications of recipe steps and wherein the recipe is for producing a quantity of a product (**Kohn**, col 18, lines 64 – 67; col 19, lines 1 – 6; col 36, lines 43-67).

Claim 10

Kohn anticipates the recipe is for a batch process (**Kohn**, col 1, lines 9 – 16).

Art Unit: 2121

Claim 11

Kohn anticipates Knowledge Builder is to extract knowledge from multiple sources through one or more Machine Learning techniques (**Kohn**, col 10, lines 54 – 57).

Claim 12

Kohn anticipates wherein the different Machine Learning techniques act independently from each other (**Kohn**, col 10, lines 54 – 57).

Claim 13

Kohn anticipates knowledge builder is scalable by adding additional the Machine Learning techniques (**Kohn**, col 2, lines 16 – 22).

Claim 14

Kohn anticipates explanation-based learning, memory based learning, situation-dependent learning (**Kohn**, col 1, lines 9 – 16).

Claim 15

Kohn anticipates the Knowledge Builder is to receive feedback from a user (**Kohn**, col 18, lines 44 – 45; col 1, lines 9 – 16).

Claim 16

Kohn anticipates the knowledge builder is scalable to incorporate new knowledge (**Kohn**, col 19, lines 7 – 13; col 2, lines 16 – 22).

Claim 17

Kohn anticipates the knowledge builder is scalable to incorporate new knowledge extraction techniques (**Kohn**, col 19, lines 7 – 13; col 2, lines 16 – 22).

Claim 20

Kohn anticipates the Decision Maker is to assemble the knowledge into an answer to a query (**Kohn**, col 18, lines 65 – 67; col 19, lines 1 – 6).

Claim 21

Kohn anticipates the answer to the query is in the form of a recipe modification that meets desired goals and constraints (**Kohn**, col 18, lines 65 – 67; col 19, lines 1 – 6).

Claim 22

Kohn anticipates the Decision Maker is to display knowledge to a user (**Kohn**, col 1, lines 11 – 15).

Claim 23

Kohn anticipates receiving one or more desired purposes for the production process; receiving a recipe, wherein the production recipe is for producing a quantity of a product (**Kohn**, col 4, lines 57 – 62; col 6, lines 14 – 17; col 18, lines 44 – 45; col 36, lines 43-67); and generating an advanced recipe comprising the set of actions and the one or more desired purposes for the production process (**Kohn**, col 1, lines 8 – 16; col 21, lines 40 – 43; col 4, lines 34 – 37).

Claim 24

Kohn anticipates the method further comprises modifying the advanced recipe in response to a user (**Kohn**, col 18, lines 44-45; col 21, lines 32-43).

Art Unit: 2121

Claim 37

Kohn anticipates the product is selected from the group consisting of chemical products, food and beverage products and pharmaceuticals (**Kohn**, col 18, lines 17-37; col 36, lines 43-67; col 37, lines 1-18; Examiner's Note (EN): such are multicomponent manufacturing processes).

Claim 38

Kohn anticipates the tailoring of the production recipe to the specific needs is changing the quantity of the product (**Kohn**, col 21, lines 40-55; col 23, lines 11-17)

Claim 39

Kohn anticipates the tailoring of the production recipe is to meet specific plant or business needs (**Kohn**, col 21, lines 40-55; col 23, lines 11-23; EN: near-optimum path is synonymous with specific plant needs).

Examination Considerations

5. The claims and only the claims form the metes and bounds of the invention. "Office personnel are to give the claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris*, 127 F.3d 1048, 1054-55, 44USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim are not read into the claim. *In re Prater*, 415 F.2d, 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969)" (MPEP p 2100-8, c 2, I 45-48; p 2100-9, c 1, I 1-4). The Examiner has full latitude

Art Unit: 2121

to interpret each claim in the broadest reasonable sense. Examiner will reference prior art using terminology familiar to one of ordinary skill in the art. Such an approach is broad in concept and can be either explicit or implicit in meaning.

6. Examiner's Notes are provided to assist the applicant to better understand the nature of the prior art, application of such prior art and, as appropriate, to further indicate other prior art that maybe applied in other office actions. Such comments are entirely consistent with the intent and spirit of compact prosecution. However, and unless otherwise stated, the Examiner's Notes are not prior art but a link to prior art that one of ordinary skill in the art would find inherently appropriate.

7. Examiner's Opinion

Paras 6 and 7 apply. The Examiner has full latitude to interpret each claim in the broadest reasonable sense.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2121

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohn et al in view of Acknowledged Prior Art (U. S. Patent 5,963,447, referred to as **Kohn**; Specification, referred to as Acknowledged Prior Art, **APA**).

Claim 18

Kohn does not teach structured knowledge repository uses abstraction-decomposition space (ADS) techniques. However, APA does teach structured knowledge repository uses abstraction-decomposition space (ADS) techniques (**APA**, page 12, lines 6 – 30; page 13, lines 1 – 6). It would have been obvious of one of ordinary skill in the art at the time of the invention to use the teachings of APA to satisfy analysis requirements as set forth in a learning environment to achieve goal setting functionality.

Response to Arguments

9. The 35 USC 101 and 35 USC 112, first paragraph, rejections related to claims 1,2 and 29-32 are withdrawn.
10. Applicant's arguments filed on June 1, 2004 related to Claims 1-7, 9-18 and 20-39 related to 35 USC 102(e) and 35 USC 103 have been fully considered but are not persuasive.

In reference to Applicant's argument:

Regarding amended independent claim 1, the Office Action indicates that either Kohn's "general-purpose architecture for incremental construction of provably-correct, near optimal systems for real-time control of small-scale and large-scale systems" (Kohn, col 4, lines 57-62), Kohn's "network of agents" that "support reuse of trusted components of other applications through declarative inclusion into new system architectures" (Kohn, col 6, lines 14-17), or Kohn's Knowledge-base Builder 22 (which supports manual input from users) anticipates the claimed

Art Unit: 2121

"production recipe." However, Applicant cannot find in the cited passages or elsewhere in Kohn, anything that anticipates a "production recipe."

Examiner's response:

Para 7 applies. With the changes to claim 1, Kohn @ c 21, l 40-44 identifies a recipe for building a procedural model which would be synonymous with the model represented by the applicant's "production recipe".

In reference to Applicant's argument:

Additionally, to clarify the invention, Applicant has amended independent claim 1 to recite "wherein the production recipe is for producing a quantity of a product." Support for this amendment can be found in the Instant Application, among other places, at Page 4, Lines 24-25. Applicant knows of no passage in Kohn that anticipates the claimed "producing a quantity of a product."

Examiner's response:

Para 7 applies. Kohn @ c 36, lines 43-67, quantity of a product is synonymous with "products."

In reference to Applicant's argument:

Claim 18 depends on amended independent claim 9. As discussed above, Applicant submits that Kohn does not teach or suggest all of the elements of claim 9. APA does not provide what Kohn is lacking.

Examiner's response:

Para 7 applies. APA @ applicant's specification, p 12, lines 17-25 cites specific references to the subject of cognitive work analysis and incorporates two of such documents into the specification by reference. Such documents address structured knowledge cognitive work analysis which is synonymous with

Art Unit: 2121

structured knowledge abstraction-decomposition space. Kohn @ c1, lines 45-52 provides the goal setting functionality motivation to one of ordinary skill in the art.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
12. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.
13. Claims 25-36 are allowed. Claims 1-7, 9-18, 20-24, and 37-39 are rejected.

Art Unit: 2121

Correspondence Information

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (703) 305-1668. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anthony Knight can be reached at (703) 308-3179.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

or faxed to:

(703) 746-7239 (for formal communications intended for entry);

or faxed to:

(703) 746-7290 (for informal or draft communications with notation of "Proposed" or "Draft" for the desk of the Examiner).



Joseph P. Hirl

August 9, 2004



Anthony Knight
Supervisory Patent Examiner
Group 3600